Title (en)

DYNAMICALLY RECONFIGURABLE FRAMEWORK FOR A LARGE-SCALE BATTERY SYSTEM

Title (de)

DYNAMISCH REKONFIGURIERBARES RAHMENWERK FÜR GROSSFLÄCHIGE BATTERIESYSTEME

Title (fr)

OSSATURE RECONFIGURABLE DYNAMIQUEMENT POUR UN SYSTÈME DE BATTERIE À GRANDE ÉCHELLE

Publication

EP 2417666 A2 20120215 (EN)

Application

EP 10762490 A 20100409

Priority

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- US 16847209 P 20090410

Abstract (en)

[origin: US2010261043A1] A dynamically reconfigurable battery framework for management of a large-scale battery system is provided. The framework monitors, reconfigures, and controls large-scale battery systems online. The framework is built upon a topology-based bypassing mechanism that provides a set of rules for changing the battery-pack configuration, and a semantic bypassing mechanism by which the battery-cell connectivity is reconfigured to recover from a battery-cell failure. More specifically, the semantic bypassing mechanism implements a constant-voltage-keeping policy and a dynamic-voltage-allowing policy. The former policy is effective in preventing unavoidable voltage drops during the battery lifetime, while the latter policy is effective in supplying different amounts of power to meet a wide-range of application requirements.

IPC 8 full level

B60L 11/18 (2006.01); **G01R 31/36** (2006.01); **G06Q 50/00** (2012.01); **H01M 10/42** (2006.01); **H01M 10/44** (2006.01); **H01M 10/48** (2006.01); **H02J 7/00** (2006.01)

CPC (source: EP KR US)

B60L 58/19 (2019.01 - EP KR); **H01M 10/4207** (2013.01 - EP KR US); **H01M 10/4257** (2013.01 - EP KR US); **H01M 10/482** (2013.01 - EP KR US); **H02J 7/0024** (2013.01 - EP KR US); **H02J 7/0047** (2013.01 - KR); H01M 2010/4271 (2013.01 - KR); H01M 2220/20 (2013.01 - EP KR US); Y02E 60/10 (2013.01 - EP KR); Y02T 10/70 (2013.01 - EP KR US)

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